

REMARKS

No new matter is added by the foregoing amendments to the claims. Written support for the text added to claims 1 and 8 can be found at page 9, lines 10 to 26, of the specification and in original claim 6.

The Applicant respectfully requests reconsideration of the claims in view of the foregoing amendments and the following remarks. The various grounds of objection and rejection set forth in the Official Action will be discussed in order.

37 CFR 1.75(c): Claim 21

The Examiner objected to claim 21 under 37 CFR 1.75(c) as being in improper form because claim 21 is a multiple dependent claim that is dependent on another multiple dependent claim. This objection is improper because it is made with respect to a claim that should have been cancelled.

On November 26, 2001, the Applicants submitted a Preliminary Amendment in which Claim 21 was cancelled and Claims 22 and 23 were added. A copy of the Preliminary Amendment is enclosed with this response. It appears either that the Preliminary Amendment was not entered prior to examination or that the Examiner overlooked the Preliminary Amendment when he examined the application. The Applicant is unsure how to properly respond to this objection. Consequently, it is being assumed that the Preliminary Amendment was not entered and the amendments that were set forth in the Preliminary Amendment are being resubmitted in the foregoing amendments to the claims. It is believed that the cancellation of claim 21 and the addition of new claims 22 and 23 obviate the objection under 37 CFR 1.75(c).

37 USC 112, Second Paragraph

The Examiner rejected claims 6 and 20 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter the applicant regards as the invention.

Claim 6

The rejection of claim 6 is based on an apparent contradiction with claim 1. The Examiner found the term ‘the parcels are formed according to an orthogonal mesh’ in claim 6 to be contradictory to the term ‘one or more of the screens have different non-orthogonal minimum meshes’ in claim 1.

Favourable reconsideration is respectfully requested for the following reasons. The ‘non-orthogonal’ requirement in claim 1 applies to the ‘minimum meshes’ in the screen. Referring to Figure 7a, for instance, the minimum mesh is the smallest rhombic repeating unit. The minimum mesh is defined by lines that intersect at angles other than right angles. Because the lines defining a rhombus intersect at non-right-angle angles, the minimum mesh in Figure 7a is non-orthogonal.

The parcels of Figure 7a are the nine grid-like squares. The squares form a mesh that is orthogonal because the intersecting lines of the mesh are at right angles. Thus, the minimum meshes in the screen can be non-orthogonal while the parcels are formed in accordance with an orthogonal mesh.

Claim 1 requires the minimum mesh to be non-orthogonal, but the parcels are not so restricted. The parcels of two or more screens of claim 1 only need to correspond in shape and size. Claim 6 is directed to a particular embodiment in which the parcels are formed according to an orthogonal mesh. There is no contradiction

because the modifiers "non-orthogonal" and "orthogonal" are applied to different features of the Applicant's claimed screen system. For all of the foregoing reasons, it is believed that the rejection of claim 6 under 35 USC 112, second paragraph is improper and should be withdrawn.

Claim 20

Claim 20 was rejected because the Examiner concluded that it was not clear whether an apparatus or a method is being claimed. The claim has been amended to clarify that an apparatus is being claimed. Accordingly, it is believed that the rejection of claim 20 under 35 USC 112, second paragraph, is overcome.

35 USC 102(b): Claims 1-5, 8-11, and 16-17

The Examiner rejected claims 1-5, 8-11, and 16-17 under 35 USC 102(b) as being anticipated by GB 1,355,540. It is submitted that the Applicant's claimed screen system as set forth in claim 1 (amended), the Applicant's claimed method as set forth in claim 8 (amended), and Applicant's claimed screen system as set forth in claim 16 are distinguishable from the apparatus and method described in GB 1,355,540.

The present invention relates to the use of a non-orthogonal minimum mesh to reduce undesirable colour effects in halftone images. The non-orthogonal minimum mesh is formed by creating a pattern of printing dots, examples of which are shown in Figures 5a-5d. The pattern of printing dots can be stored in a computer and printed on one or more screens when required. Different patterns of printing dots are preferably used for different colours. For example, the four patterns in Figures 5a-5d could be used for the following four colours, respectively: cyan, magenta, yellow, and black.

Although the Examiner found certain features of the invention anticipated by GB 1,355,540, other features of the invention were not anticipated. More specifically, in paragraph 8, on page 4 of the Official Action, the Examiner indicated that the combination of extending the printing dots along distances other than the shortest distance between printing dots with the feature relating to use of different screens for various colours disposed in a non-orthogonal arrangement is not described or suggested by any of the references of record in this application. The Applicant understands that the Examiner is referring to the two or more screens having different non-orthogonal arrangements for different colours, as recited in claims 1 and 16, and the two or more patterns having different non-orthogonal arrangements for different colours, as recited in claim 8. Claim 1(Amended) includes the following feature:

said two or more screens having different non-orthogonal minimum meshes have printing areas which extend to join first along directions other than that of their closest spacing.

A corresponding feature is included in claim 8 (Amended) as follows.

said at least two patterns having printing areas which extend to join first along directions other than that of their closest spacing.

It is respectfully submitted that claim 16 does not require an amendment because claim 16 as filed already includes the following feature.

the minimum meshes of at least two screens are non-orthogonal and have printing areas which extend to join first along directions other than that of their closest spacing.

All of the independent claims, claim 1 (amended), claim 8 (amended), and claim 16 (original) contain allowable subject matter. Accordingly, the subject matter of those claims is not anticipated by GB 1,355,540. Favourable reconsideration of the rejection under 35 USC 102(b) is respectfully requested.

Claim 13

Claim 13 is an independent claim. However, in the Official Action, the Examiner treated claim 13 as if it is a dependent claim. More specifically, in paragraph 6 on page 4 of the Official Action, the Examiner stated: "Claims 7 & 12-15 are objected to as being dependent upon a rejected base claim . . ." Claim 13 reads as follows:

13. A pattern for a halftone image, wherein:
printing areas define a non-orthogonal minimum mesh and
extend first with darkening tone along directions other than those of
their closest spacing.

It can be seen that claim 13 contains the same feature that was found to provide novelty and nonobviousness to the combinations set forth in claims 7 and 12. Therefore, claim 13 should be allowable for at least the same reasons.

The Dependent Claims

Claims 2-7 depend from claim 1 either directly or indirectly and therefore, are allowable for at least the same reasons as claim 1. Claims 9-12 depend from claim 8 either directly or indirectly and therefore, are allowable for at least the same reasons as claim 8. Claims 14 and 15 depend from claim 13 and therefore, are allowable for at least the same reasons as claim 13. Claim 17 depends from claim 16 and therefore, is allowable for at least the same reasons as claim 16. Claims 20 and 21 depend from any one of claims 1-19 and therefore, are allowable for at least the same reasons as claims 1, 8, 13, and 16. New claim 22 depends from claim 20 and therefore, is allowable for at least the same reasons as claim 20.

Information Disclosure Statement

The Applicant filed an Information Disclosure Statement on October 6, 2003 in connection with this application. The Information Disclosure Statement was received

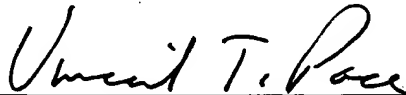
at the USPTO on October 6, 2003 and was received in Technology Center 2600 on October 8, 2003. See copy of the Information Disclosure Statement and PTO-1449 enclosed herewith. The Information Disclosure Statement was not acknowledged in the Official Action. The Information Disclosure Statement, including the PTO-1449 and the copies of the references, are in the image file wrapper for this application. All of the requirements of 37 CFR 1.97 and 1.98 have been complied with. Therefore, the Applicant respectfully reasserts its request that the patents, publications, and other information supplied in the Information Disclosure Statement be duly considered and identified on the face of any patent that issues from this application.

CONCLUSION

In view of the foregoing amendments and remarks, it is believed that the claims of this application are in condition for allowance. The Applicant respectfully requests that the Examiner reconsider and allow the application in the light of the amendments to the claims and the remarks presented hereinabove. Applicant also requests consideration of the Information Disclosure Statement filed on October 6, 2003.

Respectfully submitted,

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Enclosures

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